

WHAT IS CLAIMED IS:

- 1 1. An apparatus for sanitizing articles, comprising:
2 a conveyor for conveying articles through the apparatus;
3 an irradiation chamber surrounding the conveyor;
4 a plurality of UV lamps arranged in the irradiation chamber to irradiate with
5 UV light articles conveyed through the irradiation chamber on the conveyor.
- 1 2. The apparatus according to claim 1, wherein the conveyor continuously
2 conveys articles through the irradiation chamber.
- 1 3. The apparatus according to claim 1, wherein the UV lamps are arranged
2 above and below the conveyor
- 1 4. The apparatus according to claim 1, wherein the conveyor has apertures to
2 allow UV light to irradiate the bottom of articles placed thereon.
- 1 5. The apparatus according to claim 1, wherein the conveyor is selected from
2 the group consisting of belt, mesh, hanging, plastic chain, and metal chain
3 conveyors.
- 1 6. The apparatus according to claim 5, wherein the conveyor comprises a
2 plurality of chain conveyors, each having chains located at different widths across
3 the conveyor.
- 1 7. The apparatus according to claim 7, wherein each chain conveyor has at
2 least two chains.
- 1 8. The apparatus according to claim 1, wherein the plurality of UV lamps are
2 arranged in an ordered array.
- 1 9. The apparatus according to claim 8, wherein the array of UV lamps include
2 lamps of different lengths.
- 1 10. The apparatus according to claim 8, wherein the array of UV lamps include
2 lamps of different shapes.
- 1 11. The apparatus according to claim 1, wherein the UV lamps are elongated and
2 define an axis, and at least one of the UV lamps is arranged with its axis
3 perpendicular to the direction of the conveyor.

1 12. The apparatus according to claim 1, wherein the UV lamps are elongated and
2 define an axis, and at least one of the UV lamps is arranged with its axis at an angle
3 to the direction of the conveyor.

1 13. The apparatus according to claim 1, wherein at least one of the UV lamps
2 includes a parabolic shaped reflector.

1 14. The apparatus according to claim 11, wherein the reflector is cooled, the
2 cooling means selected from the group consisting of water-cooling, chillers, air
3 conditioners, and high velocity air flow.

1 15. The apparatus according to claim 1, wherein the UV lamps are mercury
2 vapor arc lamps.

1 16. The apparatus according to claim 1, wherein the articles are reusable
2 articles.

1 17. The apparatus according to claim 16, wherein the articles are containers.

1 18. A method of sanitizing articles for re-use comprising the steps of:
2 checking articles for cleanliness;
3 washing only articles which are discovered to be below a predetermined
4 standard of cleanliness; and
5 irradiating articles which are discovered to be above a predetermined
6 standard of cleanliness with UV light in order to sanitize such articles
7 without washing.

1 19. The method according to claim 18, further comprising removing debris from
2 the articles.

1 20. The method according to claim 18 wherein the washed articles are irradiated
2 with UV light after the washing step is completed.

1 21. The method according to claim 18 wherein the irradiation takes places in a
2 sanitization chamber while the articles are continuously moved through the chamber
3 by a conveyor.

1 22. The method according to claim 21, wherein the speed of the conveyor is
2 variable to vary the UV dose given to the articles.

1 23. The method according to claim 21, wherein the intensity of the UV light is
2 variable to vary the UV dose given to the articles.

- 1 24. The method according to claim 21, wherein the UV dose given to articles is
- 2 measured by periodically passing a UV radiometer through the chamber.

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